AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Claim 1 (Currently amended): An isolated nucleic acid molecule comprising a nucleic acid sequence which encodes a polypeptide selected from:

(a) SEQ ID No:14;

(b) an immunogenic fragment ~~comprising~~ consisting of at least 50 consecutive amino acids from SEQ ID No:14; and

(c) a polypeptide which has been modified without loss of immunogenicity, wherein said modified polypeptide is at least 95% identical in amino acid sequence to SEQ ID No:14.

Claim 2 (Previously presented): An isolated nucleic acid molecule comprising a nucleic acid sequence selected from:

(a) SEQ ID No: 1;

(b) a sequence which encodes SEQ ID No:14;

(c) a sequence consisting of at least 38 consecutive nucleotides from SEQ ID No: 1;

(d) a sequence ~~comprising~~ consisting of at least 100 consecutive nucleotides from (b).

Claim 3 (Canceled)

Claim 4 (Previously presented): A nucleic acid molecule comprising a nucleic acid sequence which encodes a fusion protein, said fusion protein comprising a polypeptide encoded by the nucleic acid molecule of claim 1 and a second polypeptide.

Claim 5 (Previously presented): The nucleic acid molecule of claim 4 wherein the second polypeptide is a heterologous signal peptide.

Claim 6 (Previously presented): The nucleic acid molecule of claim 4 wherein the second polypeptide has adjuvant activity.

Claim 7 (Previously presented): The nucleic acid molecule of claim 1, operatively linked to one or more expression control sequences.

Claim 8 (Currently amended): A vaccine vector comprising at least one nucleic acid selected from:

(i) SEQ ID No: 1;

(ii) a nucleic acid sequence ~~comprising~~ consisting of at least 38 consecutive nucleotides from SEQ ID No:1;

(iii) a nucleic acid sequence which encodes SEQ ID No: 14; ~~and~~

(iv) a nucleic acid sequence which encodes an immunogenic fragment ~~comprising~~ consisting of at least 12 consecutive amino acids from SEQ ID No: 14; and

(v) a nucleic acid sequence encoding a polypeptide which has been modified without loss of immunogenicity, wherein said modified polypeptide is at least 95% identical in amino acid sequence to SEQ ID No:14;

wherein the at least one nucleic acid is capable of being expressed.

Claim 9 (Currently amended): A vaccine vector comprising at least one nucleic acid encoding a fusion protein, wherein the fusion protein comprises:

(a) a first polypeptide selected from:

(i) a polypeptide whose sequence is set forth in SEQ ID No: 14; ~~and~~

(ii) an immunogenic fragment ~~comprising~~ consisting of at least 12 consecutive amino acids from SEQ ID No: 14; and

(iii) a polypeptide which has been modified without loss of immunogenicity, wherein said modified polypeptide is at least 95% identical in amino acid sequence to SEQ ID No:14; and,

(b) a second polypeptide;

wherein the at least one nucleic acid is capable of being expressed.

Claim 10 (Previously presented): The vaccine vector of claim 9 wherein the second polypeptide is a heterologous signal peptide.

Claim 11 (Previously presented): The vaccine vector of claim 9 wherein the second polypeptide has adjuvant activity.

Claim 12 (Previously presented): The vaccine vector of claim 8 wherein each of the at least one nucleic acid is operatively linked to one or more expression control sequences.

Claim 13 (Previously presented): The vaccine vector of claim 8 wherein the at least one nucleic acid is expressed as a first polypeptide, and wherein the vaccine vector further comprises an additional nucleic acid encoding an additional polypeptide which enhances the immune response to the first polypeptide.

Claim 14 (Previously presented): The vaccine vector of claim 13 wherein the additional polypeptide comprises a *Chlamydia* polypeptide.

Claim 15 (Previously presented): A pharmaceutical composition comprising the nucleic acid of claim 1 and a pharmaceutically acceptable carrier.

Claim 16 (Previously presented): A pharmaceutical composition comprising the vaccine vector of claim 8 and a pharmaceutically acceptable carrier.

Claim 17 (Currently amended): A unicellular host transformed with the nucleic acid molecule of ~~claim 7~~ claim 1.

Claim 18 and 19 (Canceled)

Claim 20 (Withdrawn): An isolated polypeptide encoded by the nucleic acid molecule of claim 2.

Claim 21 (Withdrawn and amended): An isolated polypeptide comprising an amino acid sequence selected from:

(a) SEQ ID No: 14; ~~and~~

(b) an immunogenic fragment ~~comprising~~ consisting of at least 12 consecutive amino acids from SEQ ID No:14; and

(c) a polypeptide which has been modified without loss of immunogenicity, wherein said modified polypeptide is at least 95% identical in amino acid sequence to SEQ ID No:14.

Claim 22 (Withdrawn): A fusion protein comprising the polypeptide of claim 21 and a second polypeptide.

Claim 23 (Withdrawn): The fusion protein of claim 22 wherein the second polypeptide is a heterologous signal peptide.

Claim 24 (Withdrawn): The fusion protein of claim 22 wherein the second polypeptide has adjuvant activity.

Claim 25 (Currently amended): A method for producing ~~the polypeptide of claim 21~~ a polypeptide encoded by the nucleic acid of claim 1 , comprising the step of culturing a unicellular host transformed with ~~a nucleic acid encoding the polypeptide of claim 21~~ the nucleic acid molecule of claim 1.

Claim 26 (Withdrawn): An antibody against the polypeptide of claim 21.

Claim 27 (Withdrawn and amended): A vaccine comprising at least one first polypeptide selected from:

(i) a polypeptide whose sequence is set forth in SEQ ID No: 14; ~~and~~

(ii) an immunogenic fragment ~~comprising~~ consisting of at least 12 consecutive amino acids from SEQ ID No: 14; and

(iii) a polypeptide which has been modified without loss of immunogenicity, wherein said modified polypeptide is at least 95% identical in amino acid sequence to SEQ ID No:14.

Claim 28 (Withdrawn and amended): A vaccine comprising at least one fusion protein, wherein the fusion protein comprises:

(a) a first polypeptide selected from:

(i) a polypeptide whose sequence is set forth in SEQ ID No: 14;

(ii) an immunogenic fragment ~~comprising~~ consisting of at least 12 consecutive amino acids from SEQ ID No: 14; and

(iii) a polypeptide which has been modified without loss of immunogenicity, wherein said modified polypeptide is at least 95% identical in amino acid sequence to SEQ ID No:14; and

(b) a second polypeptide.

Claim 29 (Withdrawn): The vaccine of claim 28 wherein the second polypeptide is a heterologous signal peptide.

Claim 30 (Withdrawn): The vaccine of claim 28 wherein the second polypeptide has adjuvant activity.

Claim 31 (Withdrawn): A vaccine comprising at least one first polypeptide according to claim 20 and an additional polypeptide which enhances the immune response to the first polypeptide.

Claim 32 (Withdrawn): The vaccine of claim 31 wherein the additional polypeptide comprises a *Chlamydia* polypeptide.

Claim 33 (Withdrawn): A pharmaceutical composition comprising the polypeptide according to claim 20 and a pharmaceutically acceptable carrier.

Claim 34 (Withdrawn): A pharmaceutical composition comprising the vaccine according to claim 27 and a pharmaceutically acceptable carrier.

Claim 35 (Withdrawn): A pharmaceutical composition comprising the antibody according to claim 26 and a pharmaceutically acceptable carrier.

Claim 36 (Previously presented): A method for preventing or treating *Chlamydia* infection comprising administering to a patient an effective amount of:

(a) the nucleic acid of claim 2;

(b) an immunogenic composition comprising a vaccine vector and at least one nucleic acid of claim 2;

(c) a pharmaceutical composition comprising the nucleic acid of claim 2 and a pharmaceutically acceptable carrier;

(d) a polypeptide encoded by the nucleic acid sequence of claim 2, or

(e) an antibody against the polypeptide defined in (d).

Claim 37 (Previously presented): A method of detecting *Chlamydia* infection comprising the step of assaying a body fluid of a mammal to be tested, with a component selected from:

(a) the nucleic acid of claim 2;

(b) a polypeptide encoded by the nucleic acid of claim 2; and

(c) an antibody against the polypeptide defined in (b).

Claim 38 (Previously presented): A diagnostic kit comprising instructions for use and a component selected from:

(a) the nucleic acid of claim 2;

(b) the polypeptide encoded by the nucleic acid of claim 2; and

(c) an antibody against the polypeptide defined in (b).

Claim 39-78 (Cancelled)

Claim 79 (Previously presented): The isolated nucleic acid molecule of claim 2, comprising a nucleic acid sequence selected from:

(a) SEQ ID No: 1; and

(b) a sequence which encodes SEQ ID No:14.

Claim 80 (Previously presented): The vaccine vector of claim 8 wherein the at least one nucleic acid is selected from:

(i) SEQ ID No: 1; and

(ii) a nucleic acid sequence which encodes SEQ ID No: 14.

Claim 81 (Previously presented): The isolated nucleic acid molecule of claim 2, comprising a nucleic acid sequence selected from:

(a) at least 38 consecutive nucleotides from SEQ ID No: 1; and

(b) a sequence comprising at least 100 consecutive nucleotides from a sequence which encodes SEQ ID No:14.

Claim 82 (Previously presented): The vaccine vector of claim 8 wherein the at least one nucleic acid is selected from:

(i) a nucleic acid sequence comprising at least 38 consecutive nucleotides from SEQ ID No:1; and

(ii) a nucleic acid sequence which encodes an immunogenic fragment comprising at least 12 consecutive amino acids from SEQ ID No: 14.

Claim 83 (Previously presented): The vaccine vector of claim 8 wherein the at least one nucleic acid is operably linked to a viral promoter functional in a mammalian cell.